

Q1. What will be the output of the following program? Explain your answer. (6 Marks)

a) [3 Marks]

```
class First
{
    public void display(String msg)
    {
        System.out.print ("/" msg);
        try
        {
            Thread.sleep(1000);
        }
        catch (InterruptedException e)
        {
            e.printStackTrace();
        }
        System.out.println ("");
    }
}

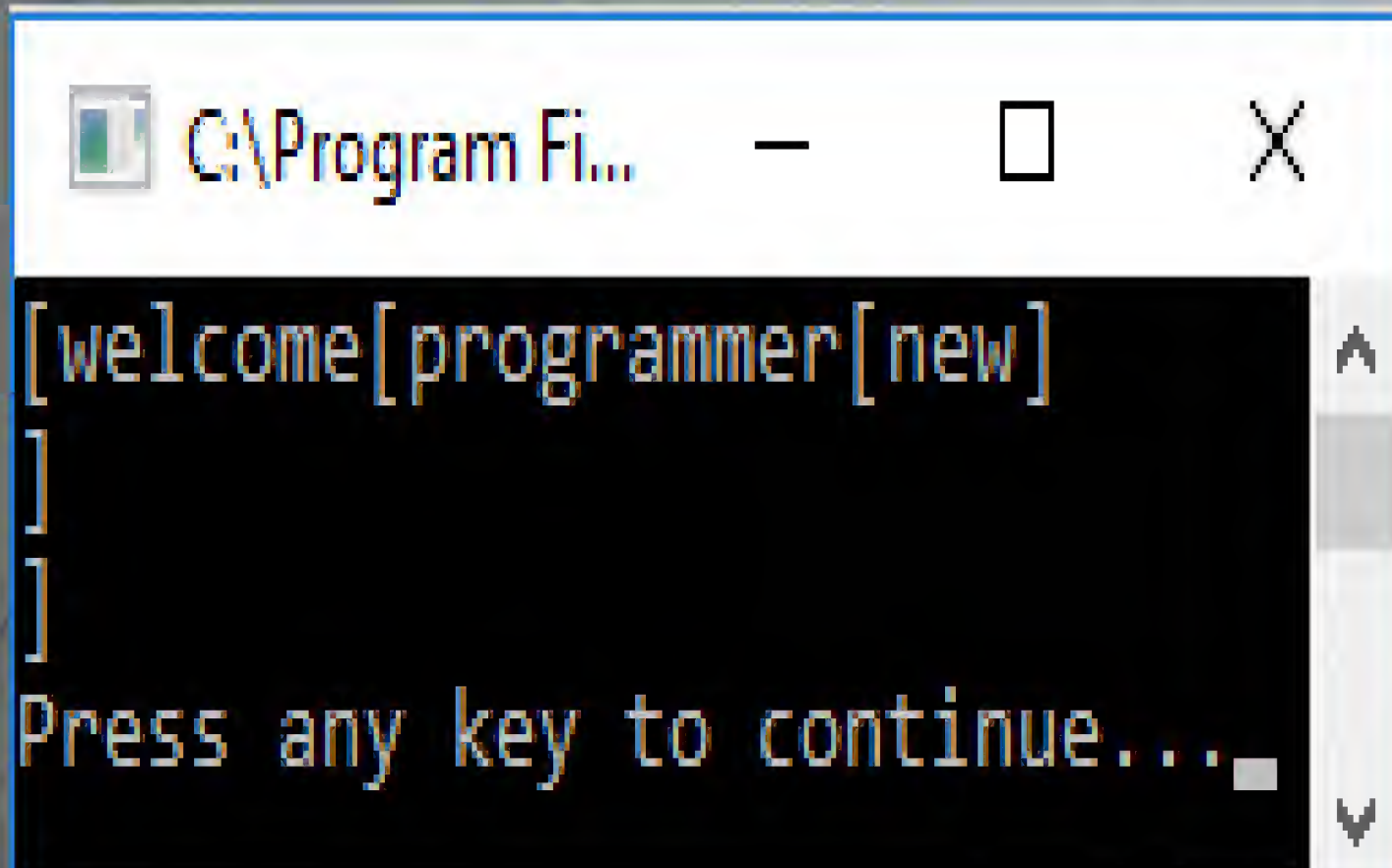
class Second extends Thread
{
    String msg;
    First fobj;
    Second (First fp, String str)
    {
        fobj = fp;
        msg = str;
    }
    public void run()
    {
        synchronized (fobj)
        {
            fobj.display(msg);
        }
    }
}

public class Syncro
{
    public static void main (String[] args) throws Exception
    {
        First fnew = new First();
        Second s1 = new Second(fnew, "welcome");
        Second s2 = new Second(fnew, "new");
        Second s3 = new Second(fnew, "programmer");
        s1.start();
        s1.join();
        s2.start();
        s2.join();
        s3.start();
    }
}
```

C:\Program Fi... — □ X

```
[welcome]
[new]
[programmer]
Press any key to continue...
```

h) What will be the output if we remove lines 29, 45 and 47 in part a? [3 Marks]



Q2. What will be the output of the following program? Explain your answer. [4 Marks]

```
public class MyThread extends Thread
{
    public void run()
    {
        System.out.println(Thread.currentThread() + " r1 ");
        try{
            Thread.sleep(500);
        }
        catch(InterruptedException ie){}
        System.out.println(Thread.currentThread().getName() + " r2 ");
    }
}

public static void main(String[] args) throws Exception
{
    MyThread t1 = new MyThread();
    MyThread t2 = new MyThread();
    t1.setName("t1");
    t2.setName("t2");
    t1.setPriority(MAX_PRIORITY);
    t2.start();
    try{
        t2.join();
    }
    catch(InterruptedException ie){}
    t1.start();
}
```

